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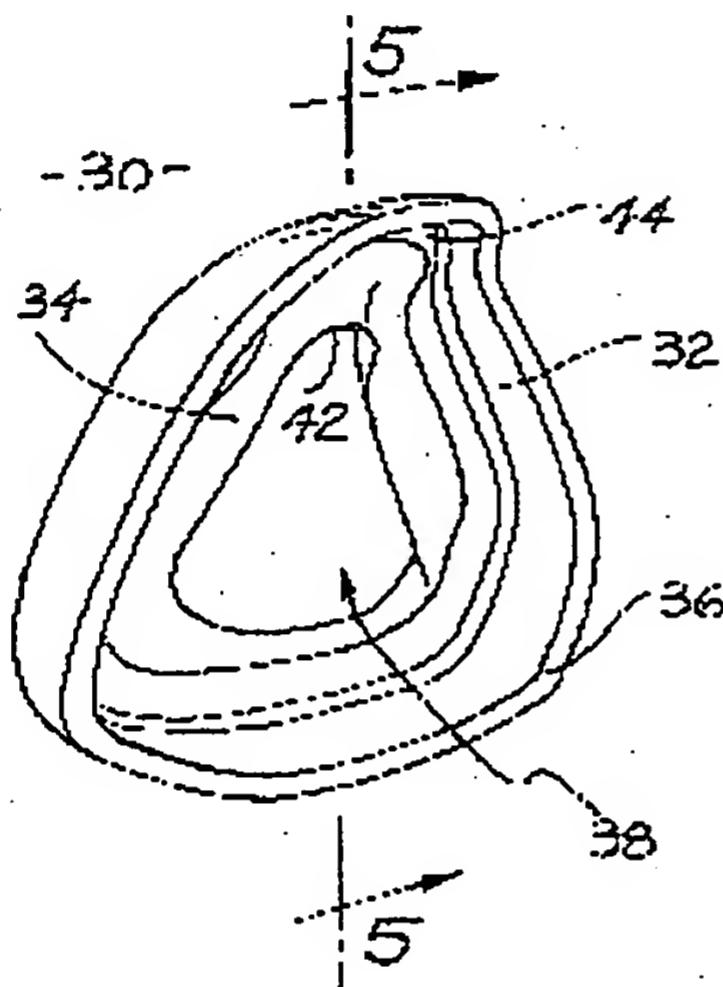
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 (54) MASQUE NASAL ET SA SURFACE D'APPUI  
 (54) A NASAL MASK AND MASK CUSHION THEREFOR



(17) La présente invention concerne une surface d'appui (30) pour masque nasal comprenant un cadre de forme sensiblement triangulaire (32) à partir duquel s'étend une membrane (34). Ce cadre (32) comprend un bord échancré (46) au moyen duquel la surface d'appui est appliquée sur le corps du masque. La membrane (34) comprend une ouverture (38) dans laquelle vient se placer le nez de l'utilisateur. La membrane (34) est étendue du bord (46) du cadre (32) de sensiblement la même forme que celle du bord (46) prédicté sensiblement la même forme que celle du bord (46). Des rainures respectives (42, 44) marquent l'arcade du nez de l'utilisateur. Le nez de l'utilisateur

(57) A nasal cushion (30) comprises a substantially triangularly shaped frame (32) from which extends a membrane (34). This frame (32) has a recessed edge (46) by which the cushion (30) is affixed to a mask body. The membrane (34) has an aperture (38) into which the wearer's nose is received. The membrane (34) is spaced away from the rim (46) of the frame (32), and its outer surface (41) is of substantially the same shape as the rim (40). Respective notches (42, 44) receive the bridge of the wearer's nose. The wearer's nose is received through the aperture (38) into the cushion within the mask body (46). The seal forming portion (45) thus contacts both the



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## Claims:

1. A nasal mask cushion to sealingly connect a mask to a wearer's face, the cushion comprising:
  - a substantially triangularly-shaped frame of resilient material having a rim to surround the wearer's nose;
  - a membrane also of resilient material, the membrane being relatively more flexible than the frame, and being of the same general shape as said rim and fixed to and extending away from the frame so as to have an outer surface spaced from the rim, a portion of said outer surface forming a face contacting seal; and
  - 10 a nose-receiving cavity bounded by said frame and said membrane; and wherein said seal portion is generally coextensive with respect to said rim and is resiliently deformable towards the rim in use of the cushion.
2. A nasal cushion as claimed in claim 1, wherein said membrane and said rim each has a co-located notch to accommodate the bridge of a nose.
- 15 3. A nasal cushion as claimed in claim 1 or claim 2, wherein said membrane and said rim are substantially saddle-shaped.
- 20 4. A nasal cushion as claimed in claim 3, wherein said membrane is shaped so that said seal portion, in use, contacts at least a wearer's nose.
- 25 5. A nasal cushion as claimed in claim 4, wherein said seal portion, in use, contacts the facial tissue around the sides and over the bridge of the nose, and between the base of the nose and the top lip.

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6. A nasal cushion as claimed in claim 1, wherein said rim and said seal portion are shaped to generally match facial contours of the facial tissue around the sides and over the bridge of the nose, and between the base of the nose and the top tip.

5 7. A nasal mask for connection to a wearer's face comprising:  
a mask body for connection with a supply of breathable gas; and  
a nasal cushion, the body and cushion defining a nose-receiving cavity, the cushion including:

10 a substantially triangularly-shaped frame of resilient material having a rim to surround the wearer's nose;

a membrane also of resilient material, the membrane being relatively more flexible than the frame, and being of the same general shape as said rim and fixed to and extending away from the frame so as to have an outer surface spaced from the frame, a portion of said outer surface forming a face contacting seal;

15 and wherein said seal portion is generally coterminous with respect to said rim and is resiliently deformable towards the rim in use of the mask.

8. A nasal mask as claimed in claim 7, wherein said mask body includes attachment points.

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9. A nasal mask as claimed in claim 8, further comprising securing straps fixed to said attachment points.

10. A nasal mask as claimed in claim 9, wherein said membrane and said 25 rim each has a co-located notch to accommodate the bridge of a nose.

11. A nasal mask as claimed in claim 10, wherein said membrane and said rim are substantially saddle-shaped.

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12. A nasal mask as claimed in claim 11, wherein said membrane is shaped so that said seal portion, in use, contacts at least a wearer's nose.

5 13. A nasal mask as claimed in claim 12, wherein said seal portion, in use, contacts the facial tissue around the sides and over the bridge of the nose, and between the base of the nose and the top lip.

10 14. A nasal mask as claimed in any one of claims 7, 8 or 9, wherein said rim and said seal portion are shaped to generally match facial contours of the facial tissue around the sides and over the bridge of the nose, and between the base of the nose and the top lip.

15 15. Nasal CPAP treatment apparatus comprising:  
a flow generator for the supply of gas at a pressure elevated above atmospheric pressure;  
a gas delivery conduit coupled to said flow generator; and  
a nasal mask in turn coupled to said conduit to said nasal mask including:  
a mask body for connection with a supply of breathable gas; and  
20 a nasal cushion, the body and cushion defining a nose-receiving cavity, the cushion including:  
a substantially triangularly-shaped frame of resilient material having a rim to surround the wearer's nose;  
a membrane also of resilient material, the membrane being relatively more flexible than the frame, and being of the same general shape as said rim and fixed to and extending away from the frame so as to have an outer surface spaced from the frame, a portion of said outer surface forming a face contacting seal;

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and wherein said seal portion is generally coextensive with respect to said rim and is resiliently deformable towards the rim in use of the mask.

16. CPAP treatment apparatus as claimed in claim 15, wherein said mask body includes attachment points.

17. CPAP treatment apparatus as claimed in claim 16, wherein further comprising securing straps fixed to said attachment points.

18. CPAP treatment apparatus as claimed in claim 17, wherein said membrane and said rim each has a co-located notch to accommodate the bridge of a nose.

19. CPAP treatment apparatus as claimed in claim 18, wherein said membrane and said rim are substantially saddle-shaped.

20. CPAP treatment apparatus as claimed in claim 19, wherein said membrane is shaped so that said seal portion, in use, contacts at least a wearer's nose.

21. CPAP treatment apparatus as claimed in claim 20, wherein said seal portion, in use, contacts the facial tissue around the sides and over the bridge of the nose, and between the base of the nose and the top lip.

22. CPAP apparatus as claimed in any one of claims 15, 16 or 17 wherein said rim and said seal portion are shaped to generally match facial contours of the facial tissue around the sides and over the bridge of the nose, and between the base of the nose and the top lip.



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(54) A NASAL MASK AND MASK CUSHION THEREFOR

(54) MASQUE NASAL ET SA SURFACE D'APPUI

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**ABSTRACT:**

A nasal cushion (30) comprises a substantially triangularly shaped frame (32) from which extends a membrane (34). The frame (32) has a scalloped edge (36) by which the cushion (30) is affixed to a mask body. The membrane (34) has an aperture (38) into which the wearer's nose is received. The membrane (34) is spaced away from the rim (40) of the frame (32), and its outer surface (41) is of substantially the same shape as the rim (40). Respective notches (42, 44) receive the bridge of the wearer's nose. The wearer's nose is received through the aperture (38) into the chamber within the mask body (46). The seal forming portion (45) thus contacts both the surface of the wearer's nose and a portion of the wearer's face in the region between the base of the nose and the upper lip, and around the sides and over the bridge of the nose. The shape of the seal forming portion (45) is particularly suited to effectively seal the difficult region of the facial contour that is the crease between the sides of the nose and the face.

**CLAIMS:** [Show all claims](#)

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